



### Section 1. Identification of the substance/mixture and of the company/undertaking.

1.1 Product identifier:	Eni Antifreeze Spezial 12 ++
1.2 Relevant identified uses of the substance or mixture and uses advised against:	Relevant identified uses: Engine coolant
1.3 Details of the supplier of the safety data sheet:	
Company:	Eni Schmiertechnik GmbH
Address and telephone no.:	Paradiesstr. 14, 97080 Würzburg Tel. (+ 49) 931 - 900 98-05 Fax (+ 49) 931-98442
Advising/Support:	Technical Department, Tel. (+49) 931 900 98-145 technik.wuerzburg@agip.de www.enischmiertechnik-datenblaetter.de

### Section 2. Hazards identification.

2.1 Classification of the substance or mixture:

According to Regulation (EC) No. 1272/2008 [CLP]:	Acute Tox. 4 (oral) STOT RE (Kidney) 2 H302, H373
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For the classification not written out in full in this section the full text can be found in section 16.

2.2 Label elements:

Globally Harmonized System, EU (GHS):

Pictogram:



Signal word:	Warning
Hazard statement:	H302 Harmful if swallowed H373 May cause damage to organs (Kidney) through prolonged or repeated exposure
Precautionary statements (prevention):	P260 Do not breathe dust/gas/mist/vapours. P270 Do not eat, drink or smoke when using this product P264 Wash with plenty of water and soap thoroughly after handling
Precautionary statements (response):	P314 Get medical advice/ attention if you feel unwell. P301+P312: IF SWALLOWED: Call a POISON CENTER or doctor/ physician if you feel unwell. P330 Rinse mouth
Precautionary statements (disposal):	P501 Dispose of contents/container to hazardous or special waste collection.
According to Regulation (EC) no. 1272/2008 [CLP]:	
Hazard determining component(s) for labelling:	ETHANE-1,2-DIOL/ETHYLENEGLYCOL

2.3 Other hazards:

According to Regulation (EC) no. 1272/2008 [CLP]:	If applicable information is provided in this section on other hazards which do not result in classification but which may contribute to the overall hazards of the substance or mixture.
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### Section 3. Composition/information on ingredients.

3.1 Substances:	Not applicable
3.2 Mixtures:	
Chemical nature:	Ethanediol; ethylene glycol, inhibitors.
Hazard ingredients (GHS) according to (EC) No. 1272/2008:	
Ethanediol; Ethylene glycol:	Content (w/w): > 90% CAS- Number 107-21-1 EC- Number no. 203-473-3 Index no. 603-027-00-1
	Acute Tox. 4 (oral) STOT RE (Kidney) 2 H302, H373



For the classifications not written out in full in this section the full text can be found in section 16.

### Section 4. First aid measures.

- 4.1 Description of first aid measures: Remove contaminated clothing.
- If inhaled: Keep patient calm, remove to fresh air, seek medical attention.
- On skin contact: Wash thoroughly with soap and water.
- On contact with eyes: Wash affected eyes for at least 15 minutes under running water with eyelids held open.
- On ingestion: Rinse mouth immediately and then drink plenty of water, seek medical attention. Administer 50 ml of pure ethanol in a drinkable concentration.
- 4.2 Most important symptoms and effects, both acute and delayed:
- Symptoms: The most important known symptoms and effects are described in the labelling (see section 2) and/or in section 11. Further important symptoms and effects are so far not known.
- 4.3 Indication of any immediate medical attention and special treatment needed:
- Treatment: Treat according to symptoms (decontamination, vital functions), no known specific antidote.

### Section 5. Fire fighting measures.

- 5.1 Extinguishing media:
- Suitable extinguishing media: Water spray, dry powder, foam.
- 5.2 Special hazards arising from the substance or mixture: Harmful vapours. Evolution of fumes/fog. The substances/groups of substances mentioned can be released in case of fire.
- 5.3 Advice for fire fighters:
- Special protective equipment: Wear a self-contained breathing apparatus.
- Further information: The degree of risk is governed by the burning substance and the fire conditions. Contaminated extinguishing water must be disposed of in accordance with official regulations.

### Section 6. Accidental release measures.

- 6.1 Personal precautions, protective equipment and emergency procedures: Use personal protective clothing. Breathing protection required.
- 6.2 Environmental precautions: Contain contaminated water/fire fighting water. Do not discharge into drains/surface waters/groundwater.
- 6.3 Methods and material for containment and cleaning up: For large amounts: Pump off product. For residues: Pick up with suitable absorbent material. Dispose of absorbed material in accordance with regulations.
- 6.4 Reference to other sections: Information regarding exposure controls/personal protection and disposal considerations can be found in section 8 and 13.

### Section 7. Handling and storage.

- 7.1 Precautions for safe handling: No special measures necessary provided product is used correctly.
- Protection against fire and explosions: Take precautionary measures against static discharges.
- 7.2 Conditions for safe storage, including any incompatibilities: The product in undamaged packing need not be stored separately.
- Further information on storage conditions: Keep container tightly closed and dry; store in a cool place.

### Section 8. Exposure controls/Personal protection.

- 8.1 Control parameters:



Components with occupational Exposure limits	107-21-1: Ethanediol; Ethylene glycol
8.2 Exposure controls:	
Personal protection equipment	
Respiratory protection:	Respiratory protection in case of vapour/aerosol release. Combination filter for gases/vapours of organic compounds and solid and liquid particles (e. g. EN 14387, Type A-P2).
Hand protection:	Chemical resistant protective gloves (EN 374). Suitable materials short-term contact and/or splashes (recommended: at least protective index 2, corresponding > 30 minutes of permeation time according to EN 374): Butyl rubber (Butyl) - 0,7 mm coating thickness Nitrile rubber (NBR) - 0,4 mm coating thickness Supplementary note: The specifications are based on tests, literature data and information of glove manufacturers or are derived from similar substances by analogy. Due to many conditions (e. g. temperature) it must be considered, that the practical usage of a chemical-protective glove in practice may be much shorter than the permeation time determined through testing. Manufacturer's directions for use should be observed because of great diversity of types.
Eye protection:	Safety glasses with side-shields (frame goggles) (e. g. EN 166).
Body protection:	Body protection must be chosen depending on activity and possible exposure, e. g. apron, protecting boots, chemical-protection suit (according to EN 14605 in case of splashes or EN ISO 13982 in case of dust).
General safety and hygiene measures:	Handle in accordance with good industrial hygiene and safety practice. Wearing of closed work clothing is recommended. No eating, drinking, smoking or tobacco use at the place of work.

## Section 9. Physical and chemical properties.

### 9.1 Information on basic physical and chemical properties:

Form:	Liquid
Odour:	Product specific
Colour:	Pink
Odour threshold:	No applicable information available
pH value:	approx. 8 (ASTM D1287) (Measured with the undiluted substance)
Melting point:	< -18°C (DIN ISO 3016)
Boiling point (1,013 hPa):	> 160°C (ASTM D1120)
Flashpoint:	> 124°C (DIN EN 22719; ISO 2719)
Evaporation rate:	Value can be approximated from Henry's Law Constant or vapour pressure
Flammability:	Not flammable
Lower explosion limit:	3,4%(V) (DIN 51649-1, air) (20°C)
Upper explosion limit:	15,1%(V) (DIN 51649-1, air) (20°C)
Ignition temperature:	420°C (DIN 51794)
Vapour pressure (20°C):	0,2 hPa
Density at 20°C:	1,122 - 1,125 g/cm <sup>3</sup> (DIN 51757)
Solubility in water:	Readily soluble
Solubility (qualitative) solvent(s):	Polar solvents: soluble
Partitioning coefficient n-octanol/ water (log Kow):	Study scientifically not justified
Self-ignition:	Not self-igniting
Thermal decomposition:	No decomposition if correctly stored and handled



Kin. Viscosity at 20°C:	20 - 30 mm <sup>2</sup> /s (DIN 51562)
Explosion hazard:	Not explosive
Fire promoting properties:	Not fire-propagating
9.2 Other information:	
Self-heating ability:	It is not a substance capable of spontaneous heating
Hygroscopy:	Hygroscopic
Other information:	If necessary, information on other physical and chemical parameters is indicated in this section.

### Section 10. Stability and reactivity.

10.1 Reactivity:	No hazardous reactions if stored and handled as prescribed/indicated.
Corrosion of metals:	No corrosive effect on metal.
10.2 Chemical stability:	The product is stable if stored and handled as prescribed/indicated.
10.3 Possibility of hazardous reactions:	No hazardous reactions when stored and handled according to instructions.
10.4 Conditions to avoid:	Avoid open flames.
10.5 Incompatible materials:	Substances to avoid: strong oxidizing agents.
10.6 Hazardous decomposition products:	No hazardous decomposition products known.

### Section 11. Toxicological information.

11.1 Information on toxicological effects:	
Acute toxicity:	
Assessment of acute toxicity:	Of moderate toxicity after single ingestion.
Experimental/calculated data:	LD (human) (oral): approx. 1.600 mg/kg
Irritation:	
Experimental/calculated data:	Skin corrosion/irritation Rabbit: Non-irritant
Serious eye damage/irritation rabbit:	Non-irritant
Respiratory/skin sensitization:	
Assessment of sensitization:	Skin sensitizing effects were not observed in animal studies. Human data do not fully exclude a skin sensitizing potential.
Germ cell mutagenicity:	
Assessment of mutagenicity:	Based on the ingredients, there is no suspicion of a mutagenic effect.
Carcinogenicity:	
Assessment of carcinogenicity:	The whole of the information assessable provides no indication of a carcinogenic effect.
Development toxicity:	Information on: Ethanediol, ethylene glycol Assessment of teratogenicity: Developmental toxicity was observed after oral ingestion of high doses in studies with rats and mice but this effect was not seen in a study with rabbits. Mechanistic studies show that the rabbit is the relevant species for the classification for human health. As such, and since ethylene glycol is not a developmental toxicant in the rabbit, no classification is warranted
Repeated dose toxicity and specific target organ toxicity (repeated exposure):	Information on: Ethanediol, ethylene glycol Assessment of repeated dose toxicity: The substance may cause damage to the kidney after repeated ingestion. The substance may cause damage to the kidney after repeated skin contact with high doses.
Aspiration hazard	No data available.
Other relevant toxicity information:	The product has not been tested. The statements on toxicology have been derived from the properties of the individual components.

### Section 12. Ecological information.



12.1 Toxicity:	
Toxicity to fish:	LC50 (96 h) > 100 mg/l, Leuciscus idus
Aquatic invertebrates:	EC50 (48 h) > 100 mg/l, Daphnia magna
Aquatic plants:	EC50 (72 h) > 100 mg/l, Algae
Microorganisms/effect on activated sludge:	Inhibition of degradation activity in activated sludge is not to be anticipated during correct introduction of low concentrations.
12.2 Persistence and degradability:	
Elimination information:	> 70% DOC reduction (28 d) (OECD 301 A (new version)) Readily biodegradable
12.3 Bioaccumulative potential:	
Bioaccumulation potential:	Accumulation in organisms is not to be expected.
12.4 Mobility in soil:	
Assessment transport between environmental compartments:	Volatility: The substance will not evaporate into the atmosphere from the water surface.
12.5 Results of PBT and vPvB assessment:	According to Annex XIII (EC) No. 1907/2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH): The product does not contain a substance fulfilling the PBT (persistent/bioaccumulative/toxic) criteria or the vPvB (very persistent/very bioaccumulative) criteria.
12.6 Other adverse effects:	The product does not contain substances that are listed in Annex I of Regulation (EC) 2037/2000 on substances that deplete the ozone layer.
12.7 Additional information:	
Other ecotoxicological advice:	The product has not been tested. The statements on ecotoxicology have been derived from the properties of the individual components. Do not release untreated into natural waters.

### Section 13. Disposal considerations.

13.1 Waste treatment methods:	Must be disposed of or incinerated in accordance with local regulations. The waste codes are manufacturer's recommendations based on the designated use of the product. Other use and special waste disposal treatment on customer's location may require different waste-code assignments. Waste key: 16 01 14 Antifreeze fluids containing dangerous substances
Contaminated packaging:	Uncontaminated packaging can be re-used. Packs that cannot be cleaned should be disposed of in the same manner as the contents.

### Section 14. Transport information.

Land transport	
ADR:	Not classified as a dangerous good under transport regulations.
UN number:	Not applicable
UN proper shipping name:	Not applicable
Transport hazard class(es):	Not applicable
Packing group:	Not applicable
Environmental hazards:	Not applicable
Special precautions for user:	Not known
RID:	Not classified as a dangerous good under transport regulations.
UN number:	Not applicable
UN proper shipping name:	Not applicable
Transport hazard class(es):	Not applicable
Packing group:	Not applicable
Environmental hazards:	Not applicable
Special precautions for user:	Not known
Inland waterway transport:	
ADN:	Not classified as a dangerous good under transport regulations.
UN number:	Not applicable
UN proper shipping name:	Not applicable



Transport hazard class(es):	Not applicable
Packing group:	Not applicable
Environmental hazards:	Not applicable
Special precautions for user:	Not known
Transport in inland waterway vessel:	No dangerous good in inland waterway vessel.
Environmental hazards:	No
Transport in inland waterway vessel:	Not classified as a dangerous good under transport regulations
UN number:	Not applicable
UN proper shipping name:	Not applicable
Transport hazard class(es):	Not applicable
Packing group:	Not applicable
Environmental hazards:	Not applicable
Sea transport:	
IMDG:	Not classified as a dangerous good under transport regulations.
UN number:	Not applicable
UN proper shipping name:	Not applicable
Transport hazard class(es):	Not applicable
Packing group:	Not applicable
Environmental hazards:	Not applicable
Special precautions for user:	Not known
Air transport:	
IATA/ICAO:	Not classified as a dangerous good under transport regulations.
UN number:	Not applicable
UN proper shipping name:	Not applicable
Transport hazard class(es):	Not applicable
Packing group:	Not applicable
Environmental hazards:	Not applicable
Special precautions for user:	Not known
14.1 UN number:	See corresponding entries for "UN number" for the respective regulations in the tables above.
14.2 UN proper shipping name:	See corresponding entries for "UN proper shipping name" for the respective regulations in the tables above.
14.3 Transport hazard class(es):	See corresponding entries for "Transport hazard class(es)" for the respective regulations in the tables above.
14.4 Packing group:	See corresponding entries for "Packing group" for the respective regulations in the tables above.
14.5 Environmental hazards:	See corresponding entries for "Environmental hazards" for the respective regulations in the tables above.
14.6 Special precautions for user:	See corresponding entries for "Special precautions for user" for the respective regulations in the tables above.
14.7 Transport in bulk according to Annex II of Marpol 73/78 and the IBC Code:	
Regulation:	IBC
Shipment approved:	1
Pollution name:	eni Antifreeze Spezial 12++
Pollution category:	Y
Ship type:	3

### Section 15. Regulatory information.

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture:

Not applicable.

### Section 16. Other information.



This information relates only to the specific product and may not be valid if the product is used in combination with any other material or in any process.

The informations in this sheet are according to our best knowledge at the date of printing.

Assessment of hazard classes according to UN GHS criteria (most recent version):

Acute Tox. 4 (oral)

STOT RE (Kidney) 2

Full text of the classifications, hazard symbols and hazard statements, if mentioned in section 2 or 3:

Acute Tox. Acute toxicity

STOT RE Specific target organ toxicity - repeated exposure

H302 Harmful if swallowed

H373 May cause damage to organs (Kidney) through prolonged or repeated exposure